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Cover Photo: USS John F. Kennedy makes her way into historic Boston Harbor as crew members are in formation on the flight deck to spell out "JACK IS BACK."

USS John F. Kennedy "Big John" (CV 67) is named for the 35th President of the United States. The ship's keel was laid October 22, 1964, at the Newport News Shipbuilding and Drydock Company in Virginia. President Kennedy's 9-year-old daughter, Caroline, christened the ship May 27, 1967, in ceremonies held at Newport News. The ship subsequently entered naval service Sept. 7, 1968. Kennedy's maiden voyage was to the Mediterranean in response to a deteriorating situation in the Middle East.

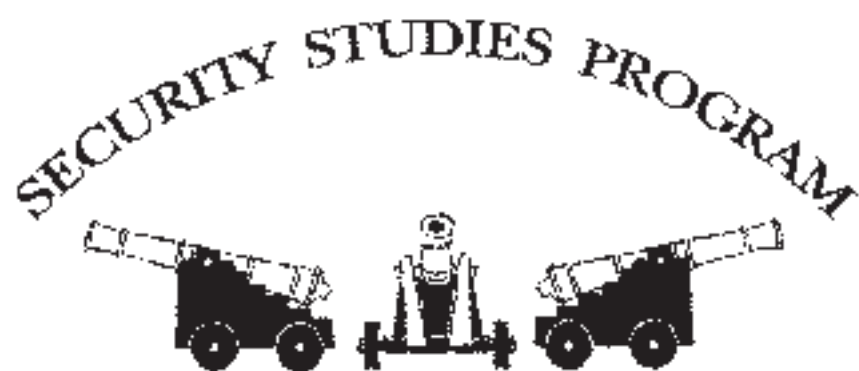
TABLE OF CONTENTS

2	Director's Statement
9	Faculty
13	Affiliates
22	Seminar Series
30	Special Events
31	Field Trips
32	Publications
36	SSP Teaching
37	Courses
41	Professional Education
42	SSP-Affiliated Graduate Students
45	SSP Directory



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MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SECURITY STUDIES PROGRAM

The Security Studies Program (SSP) is a graduate level research and educational program based at the MIT Center for International Studies. It traces its origins to two initiatives.

One is the teaching on international security topics, and most particularly on defense budgeting, that Professor William Kaufmann began in the 1960s at the MIT Political Science Department. The other is the MIT-wide seminars on nuclear weapons and arms control policy that Professors Jack Ruina and George Rathjens began in the mid-1970s.

Initially called the MIT Defense and Arms Control Studies Program, SSP's teaching ties are primarily, but not exclusively, with the MIT Political Science Department. The SSP faculty, however, includes natural scientists and engineers as well as social scientists. Distinguishing the program is its ability to integrate technical and political analyses in studies of international security issues.

Several of the SSP faculty have had extensive government experience. They and the other Program faculty advise or comment frequently on current policy problems. But the Program's prime task is educating those young men and women who will be the next generation of scholars and practitioners in international security policy making. The Program's research and public service activities necessarily complement that effort.

The Center for International Studies is a major unit of the School of Humanities, Arts, and Social Sciences at MIT and seeks to encourage the analysis of issues of continuing public concern. Key components of the Center in addition to SSP are Seminar XXI, which offers training in the analysis of international issues for senior military officers, government officials, and industry executives; the MIT Science and Technology Initiative, a pioneering international education program active in nine countries; and programs on human rights, migration, technology impacts, China, the Middle East, and U.S. foreign policy.

DIRECTOR'S STATEMENT

OVERVIEW

This year I didn't solve a single important problem. I could not gain an eviction from Program space of a former colleague who has long outworn his welcome; nor did I persuade the government to close excess defense production capacity; nor did I suggest a path to a stable, secure Iraq; nor did I discover a way to gauge the threat to national and international security posed by al Qaeda and like-minded terrorist groups. I tried locally, I tried globally, and still these problems remain unanswered.

Academic politics gone wrong are only infuriating. The stakes are almost always small potatoes. In the case of security, however, real politics gone wrong can be downright dangerous. Much can be lost — soldier and civilian

lives, scarce dollars, international trust — when the politics are unbalanced. The U.S. defense budget divides into three roughly equal parts: operations and maintenance — the consumption of fuel and spare parts in the service of military missions; personnel costs — pay and benefits for the active force, reservists, dependants, and retirees; and acquisition — the purchase of weapons and research for new ones. Cindy Williams has pointed out in her well-received *Filling the Ranks* that, over the last decade, a string of legislated enhancements to military pay and benefits have run up military personnel costs without significantly improving the military's ability to recruit and retain service members with needed skills or in the right numbers. Instead, these increases have largely



Stryker brigade on patrol.

been a boon to military retirees who lobby hard for their enactment and have too often found bipartisan support for their selfish requests.

Similarly, the nation pays a huge price for the failure to reduce significantly the weapon platform production capacity of the defense industry after the end of the Cold War. As Eugene Gholz and I have argued in numerous venues, the federal government needs an industrial policy for only one industry, the one industry in which the government is the only buyer.

The defense mergers and acquisitions wave of the 1990s shrunk the number of competitors in the defense field, but not the industry's capacity to produce weapon platforms. In the shipbuilding sector, there used to be six warship building yards and six companies. Now there are still six yards, but only two firms. The

same is roughly true for the military aircraft and armor vehicle sector as well. Only a few firms survive in each sector, although all or nearly all the assembly lines their predecessors owned in 1991 remain open under new corporate logos. Those who managed the mergers and acquisitions transactions made a fortune in shrinking the number of firms. Capital was removed from the industry, but without reducing the production capacity overhang in the industry caused by the end of the Cold War and by the diminished need for large orders of weapons. Lobbying keeps the lines open, but barely. Unit costs have skyrocketed as overhead expenses are spread among the fewer and fewer aircraft, ships, and tanks coming off the same number of assembly lines.



The fun times in Iraq.

Acquisition policy gets worse, not better. Inexplicably, the Navy recently allowed its Littoral Combat Ship contractors to use yards other than the traditional Big Six yards to build the lead ships in this new class. But the Big Six are essentially wards of the Navy. If they are not building these ships, the Navy has to find other ships for them to build. Why add more yards to the list of Navy dependants when there is not enough work to keep the Big Six yards occupied? The Marines have done something

just as dismaying. They are buying 800-plus amphibious assault vehicles of a new type, the AAVs, from General Dynamics, but instead of requiring General Dynamics to build the AAV in one of the existing underutilized armor vehicle assembly facilities, the Marines are allowing the contractor

to open another assembly line. And when the AAV run is finished, that facility too will lobby for another project and become a burden on the defense budget. Good pork barrel politics, but bad news indeed for the taxpayer.

The ongoing military operations in Iraq, of course, are on all our minds. In seminars and papers we have examined the planning and intelligence failures, the reconstruction delays, the political instability, the opportunity to change the dynamics of the Middle East, and the strategy for defeating the insurgency. We have been visited by academics of all stripes, military officers of all ranks, and experts of all opinions. We have sought to understand the source of the insurgency, the impact combat operations in Iraq (and Afghanistan) are having on the U.S. military, on recruitment of

terrorists, on the attitudes of the Europeans toward U.S. policies, and on the patience of the American people. We have looked at the equipment gaps and the promise of new technology. And we have discussed all these topics among ourselves and with our students and our fellows. There are many ideas, but no winners.

The basic problem is what might be called our modern counter-insurgency dilemma. President Bush and many others, including most of his Democrat critics, say that we must “stay the course” in Iraq because the consequences of failing to achieve a stable and democratic government for Iraq are exceedingly grave for the region and for our own security. To achieve such a government for Iraq surely requires the defeat of the insurgency. But given the limits of the All-Volunteer Force (We don’t have more troops to send to Iraq.) and limits imposed by our own polity (It is no longer politically acceptable to use the tactics that we used in Vietnam thirty years ago — never mind the ones we used in the Philippines a hundred years ago — to suppress insurgents.), the Iraqi security forces must be strong enough and motivated enough to defeat the insurgency. They have the manpower and the license to utilize the nasty tactics that successful suppressions of insurgencies seem to require. Staying the course means not leaving before the Iraqis can handle the security task on their own. But here is the



Chris Hondros/Getty Images News/Getty Images

The horror of a mistake in war.

dilemma. If the Iraqis know that we fear the consequences of leaving before they are ready to take on this burden themselves, why would they ever be ready to do this on their own? Why fight your own battles when there is someone doing the fighting who is rich and powerful and who keeps telling you that he will not leave until you are ready to do hard fighting? As Barry Posen points out, our foes in Iraq want us to stay because they think that the longer we stay, the more likely our will to fight will be broken. But our friends in Iraq also want us to stay even though staying may indeed break our will to fight what has to be their war to fight.

Of course, we can’t resist the temptation to play general. The idea that American forces should become lighter and more deployable, so popular in the viewgraphs in military presentations, seems severely challenged by the Iraq experience. Several of us — the most knowledgeable being Owen Coté who has been doing a study of Army transformation — have pointed out the value of armor in the continuing policing of Iraq. Going light means going unprotected. A related concern is the over-

reliance on networks. Here the problem may not be Iraq, where networks are not stressed by the enemy, but the future force design, where both technology and organization are depicted as limitless by advocates of a fogless war.

What about the overall war on terror? Are we winning or losing, and how thick is the fog? One of our guests, a high ranking official in the war, said that he doesn't worry about al Qaeda because of our efforts in Afghanistan and the help of allies globally, but he worries about groups that he doesn't know about and about complacency on the part of the American people. It would seem then that the war, or at least that part of the war that can be won, has been won. If al Qaeda is not much of a problem because much of its leadership has been killed or captured and what is left is living in caves on the Pakistan/Afghanistan border, then we might want to break out that "Mission Accomplished" banner again. If the remaining threat is from groups that we don't know, then we should be pleased as the really dangerous groups pop up on our radar screens years before their big hit. Al Qaeda certainly did, making claims and running deadly missions long before 9/11.

The complacency that our guest worried about results from the infrequency of attacks, not from an indifference to the attacks. After 9/11 the public was quite fearful. Men with machine guns walking the concourses of airports or standing along side bridge ramps were strange but reassuring sights. Vacations and conferences were cancelled and few felt totally comfortable

in crowds at public events. Now, despite the annoyance of airport security, people are back to elbowing their way onto planes for business and vacation trips. Complacent is just what the terrorists don't want us to be. They seek instead to make us fearful and intimidated. Complacency should be a national goal.

Our national impatience is, I think, a much greater concern. The aftermath of 9/11 brought demands for immediate results that produced two foolish reorganizations, one for homeland security and the other for intelligence. On the cries of the victims' families, we brought together nearly two dozen federal agencies, including the Coast Guard and Secret Service, into a Department of Homeland Security that most politicians knew offered only false promises of coordinated action and increased protection. Left outside the department, because they have powerful constituencies of their own, were the Federal Bureau of Investigation (responsible for coordinating responses to domestic terrorism), the Centers for Disease Control (a large part of our bio-terrorism protection), and the National Guard (which will be a large part of any disaster response). The department



Iraqi troops, the great hope.

did create a states' grants office which will be home, no doubt, to the department's main future constituency: state and local first responders — the police and fire departments — who will want their budgets paid for by distant and thus less-attentive and frugal federal taxpayers rather than their often resistant local taxpayers.

Also with the urging of the victims' families, the 9/11 Commission forced a reorganization of the intelligence community that created the post of Director of National Intelligence, an intelligence czar. Centralization seems hardly the right answer to our intelligence problems. The 9/11 attackers slipped through because the relevant agencies did not think we were at war with militant Islam and gave no great urgency to the task of heading off terrorists. The attacks themselves provide the motivation for inter-agency information exchanges that is not likely to be improved upon by directives from the intelligence czar. Moreover, there was another intelligence failure — that of missing Saddam Hussein's bluff about Iraq's possession of weapons of mass destruction. Centralization increases the likelihood of group-think among

intelligence agencies and thus of making the same kind of mistakes as happened in the run-up to the Iraq War. Reorganization is the politicians' easy response to demands for action. Centralization is too often the template of choice for the reorganizers. But hard problems like detecting nuclear weapons and terrorist cells likely require a more decentralized approach with good information exchange, something all czars — including the Romanoffs — discourage and then learn to regret.

SSP has not neglected the Weapon of Mass Destruction problem. In fact we have made an effort to bring together social scientists and biological scientists to consider the range of dangers bio-weapons and attempts to control them pose for society. Several people affiliated with our Program, most especially Greg Koblentz, Sandy Weiner, Steve Van Evera, and Jean Guillemin, as well as several of our graduates, have a serious interest in the biological weapons issue. With the good offices of MIT Vice President Alice Gast and the American Academy of Arts and Science in the person of Carl Kaysen, we have sought to engage the

large biology, bio-medical, and bio-engineering communities at MIT and in the Boston area to hear officials and experts examine the bio-weapon threat. There are parallels to the experience at the end of the Second World War, as the physicists came to consider the control of nuclear weapons. Of course, as of yet there is no



Working the WMD problem first-hand.

Hiroshima, and it is the promise of medical breakthroughs rather than the threat of war that drives research investments.

We have also added intelligence to our

course menu. With the support of the Political Science Department, we now have a CIA Officer in Residence. Bob Vickers, recently Director of Warning on the National Intelligence Council, is our first, to teach a course on Intelligence: Practice, Problems, and Prospects, as we call it. Two students in particular, Stephanie Kaplan and Josh Rovner, were instrumental in helping design the course that Barry Posen and I co-taught with Bob in its first outing. Several of our graduates are in the intelligence field, and more seem headed that way. It is a field, we discovered, where the practices are opaque, the problems significant, and the prospects outstanding.

Actually I did solve one problem. The Boston Red Sox won the World Series for the first time in nearly a century, thus proving that ritualistic pacing in the front of TV screens and wearing a red rally cap can influence events. I had not tried this before but will make it a constant in the future. Our crop of military fellows was especially pleased as they witnessed in their year with us both a Red Sox and a Patriot victory, as the local professional football team

won the Super Bowl. They even said some nice things about the Program and our students.

Some think that the sports wins were bought by the Big Dig contractors, in a scandal larger than the famous Black Sox one of the last century,

to divert public attention from the hundreds of leaks which have sprung in the network of vehicle tunnels that snakes underneath downtown Boston and the totally wet Boston harbor. The \$15 billion project has been vague on the cost and responsibility for the repairs that will assure motorists that their traffic-packed trips through the network are safe. The wags say that Boston now has a Ted Williams tunnel and an Esther Williams tunnel. Until all of this is worked out, I advise taking the ferry or a water taxi in from Logan International Airport when visiting the Program.

We have many to thank for their generosity in support of the Program. They are the Carnegie Corporation of New York, the Ford Foundation, the Proteus

Fund, the Smith Richardson Foundation, the Frankel Foundation, Lincoln Laboratory, Draper Laboratory, the Naval Sea Systems Command, the Department of Defense, the French Military Academy at St. Cyr, Junko Shimazoe, John Shephard Jr., and several anonymous donors. My colleagues and I appreciate the assistance sincerely.



Harry M. Sapiro



Criticism? You want criticism?

FACULTY

HARVEY M. SAPOLSKY is Professor of Public Policy and Organization in the Department of Political Science and Director of the MIT Security Studies Program. Dr. Sapolsky completed a B.A. at Boston University and earned an M.P.A. and Ph.D. at Harvard University. He has worked in a number of public policy areas, notably health, science and defense, and specializes in the effects of institutional structures and bureaucratic politics on policy outcomes. In the defense field he has served as a consultant to the Commission on Government Procurement, the Office of the Secretary of Defense, the Naval War College, the Office of Naval Research, the RAND Corporation, Draper Laboratory, the Johns Hopkins' Applied Physics Laboratory and Lockheed Martin, and has been a visiting professor at the University of Michigan and the U.S. Military Academy. He is currently focusing his research on three topics: interservice and civil/military relations; the impact of casualties on U.S. use of force; and the future structure of defense industries. Professor Sapolsky's most recent defense-related book, titled *Science and the Navy*, is a study of military support for academic research.

OWEN R. COTÉ, JR. joined the MIT Security Studies Program in 1997 as Associate Director. Prior to that he was Assistant Director of the International Security Program at Harvard's Center for Science and International Affairs, where he remains co-editor of the Center's journal, *International Security*. He received his Ph.D. from MIT, where he specialized in U.S. defense policy and international security affairs. His dissertation, which he is now revising for publication, analyzed the sources of innovative military doctrine, using cases that compared U.S. Navy responses to different Cold War nuclear vulnerability crises. He is also the author of *The Third Battle: Innovation in the U.S. Navy's Silent Cold War Struggle with Soviet Submarines*, a book analyzing the sources of the U.S. Navy's success in its Cold War antisubmarine warfare effort, and a co-author of *Avoiding Nuclear Anarchy: Containing the Threat of Loose Russian Nuclear Weapons and Fissile Material*. He has also written on the future of naval doctrine, nuclear force structure issues, and the threat of WMD terrorism. After graduating from Harvard College and before returning to graduate school, he worked at the Hudson Institute and the Center for Naval Analyses.

TAYLOR FRAVEL is an Assistant Professor of Political Science at MIT. He studies international relations, with a focus on international security, China and East Asia. His publications have appeared in *Foreign Affairs*, *Armed Forces & Society*, *The China Quarterly*, *Current History*, and *Asian Survey* as



Taylor Fravel

well as in edited volumes. His current research, examining how China settles territorial disputes, compares periods of cooperation and escalation. Taylor is a graduate of Middlebury College and Stanford University, where he received his PhD in 2003. He has been a Post-Doctoral Fellow at the Olin Institute for Strategic Studies at Harvard University and a Pre-Doctoral Fellow the Center for International Security and Cooperation at Stanford University. He also has graduate degrees from the London School of Economics and Oxford University, where he was a Rhodes Scholar.

GEORGE N. LEWIS is a Principal Research Scientist and Associate Director of the MIT Security Studies Program. Dr. Lewis spent five years as a Research Associate in Cornell University's Department of Applied Physics after receiving his Ph.D. in experimental solid state physics from Cornell's Physics Department in 1983. Prior to coming to MIT in 1989, he was a fellow in the Peace Studies Program at Cornell and at the Center for International Security and Arms Control at Stanford. His research has included studies of arms control and verification for sea-launched cruise missiles and other non-strategic nuclear weapons, air surveillance and early warning systems, the effectiveness of ballistic missiles and of defenses against such missiles and the performance of Patriot in the 1991 Gulf War. Dr. Lewis is now conducting research on a number of issues relevant to ballistic missile defense and security issues involving outer space.

ALLISON MACFARLANE is a Research Associate with the MIT Security Studies Program. In 2003-04 she was Associate Professor of International Affairs and Earth and Atmospheric Science at Georgia Tech in Atlanta, GA. She received her PhD in geology from MIT in 1992. She has held the position of professor of geology and women's studies at George Mason University where she taught a wide variety of geology and environmental courses. She has also held fellowships at the Bunting Institute at Radcliffe College, the Center for International Security and Arms Control at Stanford University, and the Belfer Center for Science and International Affairs at Harvard University. From 1998-2000 she was a Social Science Research Council-MacArthur Foundation fellow in International Peace and Security. From 1999-2001 she served on a National Academy of Sciences panel on the spent fuel standard and excess weapons plutonium disposition. Her research focuses on international security and environmental policy issues associated with nuclear weapons and nuclear energy. She has recently edited a book on the unresolved technical issues for nuclear waste disposal at Yucca Mountain, Nevada, to come out in spring 2006.

BARRY R. POSEN is Ford International Professor of Political Science at MIT and serves on the Executive Committee of Seminar XXI, an educational program for senior military officers, government officials and business executives in the national security policy community. He has written two books, *Inadvertent Escalation: Conventional War and Nuclear Risks* and *The Sources of Military Doctrine*, which won two awards: The American Political Science Association's Woodrow Wilson Foundation Book Award,



Is it the terrain or the training that made the difference?

and Ohio State University's Edward J. Furniss Jr. Book Award. He is also the author of numerous scholarly articles, including his most recent "Command of the Commons: The Military Foundation of U.S. Hegemony," *International Security*, (Summer, 2003). He has been a Council on Foreign Relations International Affairs Fellow; Rockefeller Foundation International Affairs Fellow; Guest Scholar at the Center for Strategic and International Studies; Woodrow Wilson Center Fellow, Smithsonian Institution; and most recently, Transatlantic Fellow of the German Marshall Fund of the United States. Dr. Posen's current research interests include U.S. national security policy, the security policy of the European Union, the organization and employment of military force, great power intervention into civil conflicts, and innovation in the U.S. Army, 1970-1980.

RICHARD J. SAMUELS is Ford International Professor of Political Science and Director of the MIT Center for International Studies. Professor Samuels specializes in comparative politics, political economy, and Asian security affairs. He is the author of numerous articles and has written or edited eight books. His 1987 book, *The Business of the Japanese State: Energy Markets in Comparative and Historical Perspective*, won the Ohira Prize. His 1994 book, *Rich Nation, Strong Army: National Security and the Technological Transformation of Japan* (winner of the 1996 John Whitney Hall Prize and the Arisawa Prize) concerned the Japanese technology process, the aerospace industry, and relations between the military and civilian economies. In 2003 he published *Machiavelli's Children*, a study of political leadership in Italian and Japanese history, which won the Jervis-Schroeder prize of the American Political Science Association and the Marraro prize of the Society for Italian Historical Studies. Professor Samuels is currently general editor of the *Encyclopedia of U.S. National Security* (Sage, forthcoming). He is founding director of the MIT-Japan Program and chairman of the Japan-U.S. Friendship Commission, an independent federal agency. He is currently in Japan doing research for a book on Japanese grand strategy.



STEPHEN VAN EVERA is Professor in the MIT Political Science Department. He earned his B.A. in government from Harvard and his M.A. and Ph.D. in political science from the University of California, Berkeley. Prof. Van Evera works in several areas of international relations: the causes and prevention of war, U.S. foreign policy, U.S. security policy, U.S. intervention in the Third World, international relations of the Middle East, and international relations theory. He has published books on the causes of war and on social science methodology, and articles on American foreign policy, American defense policy, nationalism and the causes of war, and the origins of World War I. From 1984-1987 he was managing editor of the journal *International Security*.

ROBERT VICKERS is a member of the CIA's senior Executive Service. Before coming to MIT, he served for eight years as the National Intelligence Officer for Warning on the DCI's National Intelligence Council. During his career Mr. Vickers has worked as the Director of Analysis at the National Photographic Interpretation Center and at the CIA's Office of Imagery Analysis. He was also a Deputy Director of the Office of Africa and Latin America at the CIA. He served as Executive Assistant to the Director of Central Intelligence's Senior Review Panel and in the 1980's he was a senior editor of the President's Daily Brief. Mr. Vickers began his career as an intelligence Officer in the U.S. Army from 1965 to 1967 including a tour in Vietnam. Mr. Vickers has undergraduate and graduate degrees in international relations from the Georgetown University School of Foreign Service and the London School of Economics and Political Science, respectively, and has attended the U.S. Armed Forces Staff College and the British Royal Defense College.

CINDY WILLIAMS is a Principal Research Scientist of the MIT Security Studies Program. Her work at MIT includes an examination of national security choices facing the U.S., a study of options for reform of military personnel policies and an examination of the transition to all-volunteer forces in the militaries of several European countries. Formerly she was an Assistant Director of the Congressional Budget Office, where she led the National Security Division in studies of budgetary and policy choices related to defense and international security. Dr. Williams has served as a director and in other capacities at the MITRE Corporation in Bedford, Massachusetts; as a member of the Senior Executive Service in the Office of the Secretary of Defense at the Pentagon; and as a mathematician at RAND in Santa Monica, California. Her areas of specialization include the national security budget, military personnel policy, command and control of military forces, and conventional air and ground forces. Dr. Williams holds a Ph.D. in mathematics from the University of California, Irvine. She has published in the areas of command and control and the defense budget, and she is the editor of two books: *Holding the Line: U.S. Defense Alternatives for the Early 21st Century* (MIT Press, 2001) and *Filling the Ranks: Transforming the U.S. Military Personnel System* (MIT Press, 2004). She is an elected fellow of the National Academy of Public Administration and a member of the Naval Studies Board, the Council on Foreign Relations, and the International Institute of Strategic Studies. She serves on the advisory board of Women in International Security and on the editorial board of *International Security*.

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RICK CINQUEGRANA is a Senior Project Director with the National Academy of Public Administration in Washington, DC. He left the CIA and the US Government after 35 years, during which time he served as Deputy Staff Director and Chief Investigative Counsel for the Senate and House Intelligence Committees' Joint Inquiry into September 11th, Deputy Inspector General for Investigations at CIA, Deputy Counsel to the Attorney General for Intelligence Policy, and a variety of other senior positions in the CIA, Justice Department, and the Congress. He is also an adjunct faculty member of the Law School at Catholic University, and has lectured and taught at a number of other universities and organizations.

JUAN COLE is Professor of Middle East and South Asian History at the University of Michigan. He grew up in a military family, with two tours in France and one in Ethiopia. He has an MA (1978) in Arabic Studies/History from the American University in Cairo. He has published *Colonialism and Revolution in the Middle East* (1993), about the 1882 Urabi Revolution that provoked the British colonization of Egypt; he used private expatriate Iranian archives to produce a book in 1998 on 19th Century Iranian millenarianism; and *Sacred Space and Holy War* (2002), a history of Shi'ite Islamic responses to Modernity that includes substantial attention to Iraq. Since September 11 he has become a public intellectual, writing widely on issues in the War on Terror, al-Qaeda, and the Iraq War, with opinion pieces in major newspapers and at Salon.com.

MICHAEL DORAN is an Assistant Professor in the Department of Near Eastern Studies at Princeton University, and an Adjunct Senior Fellow at the Council on Foreign Relations in New York. He teaches courses on political Islam, Middle Eastern nationalisms, U.S.-Middle East relations, and the Arab-Israeli conflict. From 1997 to 2000, Dr. Doran was an Assistant Professor of History at the University of Central Florida. He is the author of a study of the first Arab-Israeli

war, entitled *Pan-Arabism before Nasser: Egyptian Power Politics and the Palestine Question* (Oxford University Press, 1999), and is currently working on a book entitled *The Trump Card: Israel in the Arab Civil War*. After he published an influential article on Osama bin Laden in the January/February 2002 issue of *Foreign Affairs*, both government and business have frequently invited him to speak on Middle Eastern affairs.

JEANNE GUILLEMIN is a Professor of Sociology at Boston College, where she has taught both basic courses in anthropology and graduate level courses on health care and on cultural interpretations of risk and danger. Her book, *Anthrax: The Investigation of a Deadly Outbreak* (University of California Press, 1999) chronicles the scientific inquiry into the source of the 1979 anthrax outbreak in the closed Soviet city of Sverdlovsk that pinpointed the military cause of the outbreak. In the aftermath of the 2001 anthrax postal attacks, she appeared frequently on television and radio and has remained a consultant to ABC News and NPR on biological weapons issues. Her latest book is *Biological Weapons: From the Invention of State-sponsored Programs to Contemporary Bioterrorism* (Columbia University Press, 2005), written with MacArthur Foundation funding. She has also written on the U.S. military's troubled anthrax vaccination program (AVIP) inaugurated in late 1997 and on the U.S.-Soviet "yellow rain" mycotoxin controversy of the 1980s. She is currently involved in evaluation of U.S. biodefense programs, particularly the expanding research on select agents.

JOYCE LEE MALCOLM is Professor of History at Bentley College and former Fellow of the James Madison Program at Princeton University. Her latest book, *Guns and Violence: The English Experience* (Harvard University Press, 2002) is an analysis of the relationship between guns and violent crime in England. An earlier book, *To Keep and Bear Arms: The Origins of an Anglo-American Right* (Harvard University Press, 1996), was the first full-scale study by a professional historian of the origins of a significant and controversial liberty, the right to be armed. Professor Malcolm is on a leave of absence next year to take up the post as Director of the Research Division of the National Endowment for the Humanities.

DAVID A. ROSENBERG is a Professor at the National War College. He has held positions at the Office of the Secretary of Defense, the Naval War College, the University of Houston, and Temple University. A Commander in the Naval Reserve, Professor Rosenberg is widely regarded as one of the leading historians of U.S. Cold War naval and nuclear strategies. Currently, Professor Rosenberg is completing a biography of Admiral Arleigh A. Burke, the great hero of the modern Navy.

ROBERT S. ROSS is Professor of Political Science at Boston College, and Associate at the Fairbank Center for East Asian Research, Harvard University. His current research focuses on Chinese use of force and deterrence in East Asia and the implications of the rise of China on East Asian security. His most recent book is *U.S.-China Relations, 1955-1971: A Reexamination of Cold War Conflict and Cooperation*, co-editor (Asia Center, Harvard University, 2001). He is currently collaborating with the Institute of Strategic Studies at Peking University on a project examining historical and theoretical perspectives on rising powers and on the influence of the rise of China on contemporary international politics. He is also co-editor of the forthcoming *Normalization of U.S.-China Relations: An International History* and of *New Directions in the Study of Chinese Foreign Policy*.

MICHAEL SCHRAGE is co-director of the MIT Media Lab's eMarkets Initiative, where he oversees research in the design and diffusion of market mechanisms in networks. His ongoing work focuses on the economics and ethology of models, prototypes and simulations in managing innovation and risk. His book, *Serious Play* (Harvard Business School Press, 2000), explores these issues and has been widely adopted as a text in many graduate business and design programs worldwide. Mr. Schrage is a member of the advisory board of the *Sloan Management Review*, an occasional columnist for *Technology Review* and advises firms such as Microsoft, InterActive Corp., GE, Intel and British Telecom on innovation management issues. Schrage's research focuses on the economics of technical and organizational innovation in national security institutions.

JOEL SOKOLSKY is Dean of Arts and a Professor of Political Science at the Royal Military College of Canada (RMC). His areas of interest and teaching include Canadian foreign and defense policy, international security relations and American foreign and defense policy. He has been the recipient of several scholarships and awards, including two NATO Fellowships and two Fulbright Scholarships. In 1995, he was named to the Teaching Excellence Honors List at RMC and in 2005 won the RMC Research Excellence Award. In 2003 he was awarded the Queen's Golden Jubilee Medal. His works include: *Seapower in the Nuclear Age: The United States Navy and NATO, 1949-1980*; *Canadian Defense Policy: Decisions and Determinants*, *The Americanisation of Peacekeeping: Implications for Canada*; *Projecting Stability: NATO and Multilateral Naval Cooperation in the Post-Cold War Era*; *Sailing in Concert: The Strategy and Politics of Canada-U.S. Naval Interoperability*," *The Soldier and The State in the Post-Cold War Era* and most recently, *Realism Canadian Style: National Security and the Chrétien Legacy*, and *Guarding the Continental Coasts: United States Maritime Homeland Security and Canada*.



American forces in Fallujah.



2004-05 SSP Military Fellows: (L-R) Wilkinson, Henderson, Strada and Miklos.

LIEUTENANT COLONEL SCOTT A. HENDERSON, USAF

United States Air Force Fellow

Lt. Col. Henderson entered the Air Force in 1985 with an astronautical engineering degree from the U.S. Air Force Academy and has served in a variety of space operations, development and staff assignments. Prior to coming to the MIT Security Studies Program, he was the commander of the 2d Space Operations Squadron, Schriever Air Force Base, CO, responsible for over 180 military and DoD civilian personnel operating the Global Positioning System. Lt. Col. Henderson has a M.S. in Engineering Management from Florida Tech. He is a graduate of a number of professional military education programs, including Air War College, Air Command and Staff College, and the Joint Armed Forces Staff College.

LIEUTENANT COLONEL MICHAEL T. MIKLOS, USA

Army Senior Service College Fellow

LTC Miklos enlisted in the Army in 1978 and began his career at Fort Devens. He graduated from the U.S. Military Academy in 1984 and was commissioned as an artillery officer. He has served in several cannon and rocket artillery units, and has commanded a cannon battery in Germany and an infantry training company in South Carolina. Additionally, LTC Miklos served a tour at the Canadian Artillery School in New Brunswick.

A graduate of the Army's Command and General Staff College in 1995 and the School of Advanced Military Studies in 1996, he served as a Planner at the tactical, operational, and strategic levels. Upon departure from the Pentagon where he served on the Army Staff during the last QDR, LTC Miklos commanded a Multiple Launch Rocket System battalion in the First Infantry Division. Prior to coming to the MIT Security Studies Program, he held the position of Secretary of the Combined and Joint Staff for CJTF-7 in Iraq.

LIEUTENANT COMMANDER DOMINICK STRADA, USN

Navy Federal Executive Fellow

LCDR Strada came to us from Helicopter Combat Support Squadron FIVE (HC-5) in Guam where he was the squadron Operations Officer and an Officer-in-Charge of a MH-60S helicopter detachment deployed aboard an ammunition ship in support of Operation Iraqi Freedom.

LCDR Strada began his naval career in 1991 after graduating from the U.S. Naval Academy with a B.S. in Physics. After flight training and designation as a Naval Aviator, LCDR Strada reported to HC-5 as an H-46D helicopter pilot where he deployed aboard ammunition and supply ships in support of Fifth and Seventh Fleet operations. LCDR Strada graduated from U.S. Naval Test Pilot School in 1998 and was assigned to the Naval Rotary Wing Aircraft Test Squadron in Patuxent River, MD, where he acted as Project Officer and Test Pilot on several programs, most notably the MH-60S. In 2001, LCDR Strada reported to HC-3 in San Diego, CA, as the Operations Officer and the first MH-60S Instructor Pilot. LCDR Strada earned a M.S. in Aviation Systems from the University of Tennessee in 2002.

COLONEL DAVID H. WILKINSON, USMC

Commandant of the Marine Corps Fellow

Col. Wilkinson graduated from Purdue University in 1983. His first assignment was to the "Hawks" of VMA(AW)-533 in Cherry Point, NC, where he participated in two Mediterranean cruises aboard the USS John F. Kennedy. Col. Wilkinson has been assigned to a variety of roles throughout his career; some highlights include service as the Air Officer with the Third Battalion, Eighth Marines and as a Forward Air Controller with the Second Battalion, Eighth Marines. He flew 29 combat missions in Operation Desert Storm. He was assigned to MCAS El Toro where he worked with the VMFA(AW)-242, completing two WESTPAC deployments and serving as the S-4, S-2 and S-1 officer while there. Before coming to SSP, Col. Wilkinson served as the Commanding Officer of Marine All Weather Fighter Attack Squadron 332 and deployed with them throughout the Pacific Theater in support of the Unit Deployment Program.

RESEARCH FELLOWS

ROBERT BUDERI is former Editor in Chief of MIT's *Technology Review* magazine and the author of *Engines of Tomorrow* (Simon and Schuster 2000), an account of the evolution and current practice of corporate research. His acclaimed first book, *The Invention That Changed the World* (Simon and Schuster 1996), examined radar's impact on World War II and post-war science and technology and was part of the Alfred P. Sloan Foundation's Technology Series. A former *BusinessWeek* technology editor and Vannevar Bush Fellow at MIT, Buderer has written for numerous publications, including *Newsweek*, *Time*, *Science*, *Nature*, *The Economist*, *Sports Illustrated* and *The Atlantic Monthly*. Buderer also served as advisor to the British Broadcasting Corporation's Science at War documentary series and to two History Channel programs about World War II. As editor of *Technology Review*, Buderer led the magazine to numerous editorial and design awards and oversaw its expansion into three foreign editions, electronic newsletters, and into highly successful events and conferences. He speaks widely about emerging technologies and their impact and is a regular guest of CNBC's Strategy Session and the Wall Street Journal Report.

PETER DUFFY is a senior manager at the Naval Undersea Warfare Center (NUWC) in Newport, Rhode Island. NUWC operates the Navy's laboratory for research, development, test and evaluation, and fleet support of undersea submarine systems. During his career, Mr. Duffy has held several acquisition and line management positions, including Lightweight Torpedo Program Manager, Head of the Missile Systems Division, Head of the Missile and Platform Systems Department and Director of Strategic Planning. Mr. Duffy served in the U.S. Navy from 1973–1977 as a Deep Sea Diver at the fleet ballistic missile submarine base in Holy Loch, Scotland. He earned a B.S. in mechanical engineering in 1983 from the University of Massachusetts, Amherst and a M.B.A. from MIT in 2000. He is an Alfred P. Sloan Fellow. He is also a 1990 graduate of the Program Managers Course at the Defense Systems Management College, Ft. Belvoir, VA.

GREGORY KOBLENTZ is a recent graduate of the MIT Political Science department, receiving his doctorate in 2004. His dissertation assesses the international security implications of biological weapons and the strategic consequences of their proliferation. It examines the impact of biological weapons on four key areas of concern for international security: proliferation and arms control, deterrence, civil-military relations, and threat assessment. The major findings of the dissertation have been published in "Pathogens as Weapons: The International Security Implications of Biological Warfare," *International Security*, Vol. 28, No. 3 (Winter 2003-04). His research has been supported by grants from the John D. and Catherine T. MacArthur Foundation and the John Anson Kittredge Educational Fund. During 2002-2003, he was a National Security Fellow at the Olin Institute for Strategic Studies, Harvard University. Previously, he was a Research Specialist with the Executive Session on Domestic Preparedness at the John F. Kennedy School of Government where he published studies on bioterrorism and homeland security. He has also worked for the Nuclear Non-Proliferation Project at the Carnegie Endowment for International Peace. He is the co-author of *Tracking Nuclear Proliferation* (Carnegie Endowment for International Peace, 1998) and has also published articles in *The Nonproliferation Review*, *Arms Control Today*, and *Jane's Intelligence Review*. He teaches an undergraduate course at MIT on terrorism and the proliferation of weapons of mass destruction.

SANFORD WEINER is a policy analyst focusing on technology and organizational change in the chemical, health and defense industries. Currently he is working on comparative studies of defense and civilian innovation, including the development of precision weapons. He is also looking at cross-national responses to health and environmental risks, and at the threats from bioterrorism. Mr. Weiner has previously been on the research staffs at the School of Public Policy, University of California, Berkeley, the Heller School at Brandeis University, and two other policy research centers at MIT. He currently is the Course Director for the MIT Professional Courses, “Promoting Innovation: The Dynamics of Organizations and Technology” and “Combatting Bioterrorism: Implementing Policies for Biosecurity.”

RESEARCH AFFILIATES

EUGENE GHOLZ is an Assistant Professor at the LBJ School of Public Affairs at the University of Texas at Austin. He is also a term member of the Council on Foreign Relations. He has written and co-written numerous articles, book chapters, and op-ed columns on the defense industry, military innovation, the political economy of national security, and strategic trade policy. His current research emphasizes systems integration in the defense industry and the links between oil and the American national interest. His book, *Buying Transformation: Military Innovation and the Defense Industry* (co-written with Peter Dombrowski), will be published in the spring of 2006. He taught previously at the University of Kentucky’s Patterson School of Diplomacy and International Commerce, and he was a national security fellow at Harvard University’s Olin Institute of Strategic Studies. He has a Ph.D. in political science from MIT.

MARSHAL MICHEL is a former Air Force officer who is working on his Ph.D. dissertation, “The Revolt of the Majors: How the Air Force Changed After Vietnam,” a study of peacetime military innovation. Focusing on the time period 1973-1984, he is specifically examining the “bubble up” innovation that made realistic training a part of the American military and the conflict between the Defense Reform Movement and the Air Force over high technology weapons. Formerly an F-4 and F-15 pilot and the United States Air Attaché to Israel, he is the author of two books, *Clashes: Air Combat Over North Vietnam 1965-1972* and *The Eleven Days of Christmas: America’s Last Vietnam Battle*. He is also a MIT Resident Scholar at Simmons Hall.

DARYL PRESS is Associate Professor of political science at the University of Pennsylvania. His research focuses on U.S. foreign policy, crisis decision making, military forces and operations, and the connections between economics and war. Professor Press recently published a book, *Calculating Credibility*, which examines the effects of a country’s actions in one crisis on its credibility in future crises. In other projects, he is finishing an article with Prof. Keir Lieber on U.S. nuclear forces and the changing global nuclear balance and an article with Prof. Eugene Gholz on the effects of wars on oil prices.

LAURA REED received her Ph.D. in Political Science from MIT in 1995 and was an Assistant Professor at Wellesley College during the spring semester of 1995. Formerly a program officer for the Committee on International Security Studies (CISS) at the American Academy of Arts and Sciences, she has edited CISS volumes, including *Lethal Commerce: The Global Trade in Small Arms and Light Weapons* (with Jeffrey Boutwell and Michael Klare), *Collective Responses*

to Regional Problems: The Case of Latin America and the Caribbean (with Robert Pastor and Carl Kaysen), and *Emerging Norms of Justified Intervention* (with Carl Kaysen). Her current research examines the feasibility of a United Nations military force.

EMERITI

CARL KAYSEN is David W. Skinner Professor of Political Economy Emeritus in the Program in Science, Technology, and Society and a Senior Lecturer at the MIT Center for International Studies. Dr. Kaysen earned his B.A. in Economics at the University of Pennsylvania, and his Ph.D. at Harvard University, where he was an economics professor from 1950-1966. From 1966 until 1976, when he came to MIT, he was Director of the Institute for Advanced Study at Princeton and from 1961-1963, he was the Deputy Special Assistant for National Security Affairs to President Kennedy. He has served as a consultant to RAND, the Defense Department, and the CIA. As chairman of the Committee on Security Studies of the American Academy of Arts and Sciences, Dr. Kaysen is currently engaged in a series of studies under the auspices of the Committee on the role of international law and international norms in providing peace and security.

GEORGE W. RATHJENS became Professor in the Department of Political Science after service with the Institute for Defense Analyses, the U.S. Arms Control and Disarmament Agency, the Advanced Research Projects Agency of the Department of Defense, the Office of the President's Science Advisor, and the Weapons Evaluation Group of the Department of Defense. He has also served in the Department of State. Dr. Rathjens received his B.S. from Yale University and completed his Ph.D. in chemistry at the University of California, Berkeley. He has been active in a number of associations, including the Council for a Livable World and the Federation of American Scientists, both of which he has been Chairman. He recently retired as Secretary-General of the Pugwash Conferences on Science and World Affairs. Dr. Rathjens' major policy interests are nuclear arms issues, environmental problems with special emphasis on conflict and the environment, and post-Cold War international security questions, including particularly problems of intervention in instances of ethnic and intrastate conflict.

JACK RUINA is Professor Emeritus of Electrical Engineering, MIT. Prof. Ruina was an undergraduate at the City College of New York and did his graduate work at the Polytechnic Institute of Brooklyn, earning his MEE and DEE there. He has been granted the Outstanding Alumnus Award from both colleges. He taught at Brown University and the University of Illinois; at the latter, he also headed the Radar Division of the Control System Laboratory. While on leave from the University of Illinois, he served in several senior positions at the Department of Defense, the last being Director of the Advanced Research Projects Agency, and was honored with the Fleming Award for being one of ten outstanding young men in government in 1962. He served on many government committees, including a presidential appointment to the General Advisory Committee, 1969-1977, and acted as Senior Consultant to the White House Office of Science and Technology Policy, 1977-1980. He also held the post of President of the Institute for Defense Analyses. At MIT, he has held the position of Vice President for Special Laboratories and was Secretary of the MIT Faculty. Prof. Ruina remains an honorary member of the Board of Trustees for The MITRE Corporation. He was instrumental in establishing the MIT Security Studies Program and was its first Director. Prof. Ruina's special interest is in strategic weapons policy.



The homeland security problem arrives.

SEMINAR SERIES

SSP SEMINAR SERIES FALL 2004

The Security Studies Wednesday Seminar Series provides a forum for discussing current security topics and the varying disciplinary perspectives on security studies. This is the Program's primary seminar series, held in the traditional Wednesday noon timeslot. Summaries of this series are posted electronically at our website: <http://web.mit.edu/ssp/>

September 15, 2004

Is There a "New Warfare?" America's Post-9/11 Wars and Meanings of Military Transformation

Carl Conetta, Co-Director
The Project on Defense Alternatives
The Commonwealth Institute

September 22, 2004

The Role of Size and Range in the Future of Aerospace Power Projection

Alan Epstein, Professor
Aeronautics and Astronautics, MIT

September 29, 2004

How to Understand Syrian Politics: One Historian's View

Philip Khoury, Professor of History and Dean
School of Humanities and Social Science, MIT

October 6, 2004

The Changing Nature of State Sponsorship of Terrorism

Daniel Byman, Professor
Security Studies Program, Georgetown University

October 13, 2004

The China Threat?

Col. Russ Howard, USA, Professor and Head
Department of Social Sciences
U.S. Military Academy, West Point

October 20, 2004

Nazi State Terror and Contemporary Global Terrorism

Omer Bartov, Professor
European History department, Brown University

October 27, 2004

Preparing for Post-Saddam Iraq: Plans and Actions

Charles Patterson, Foreign Service Officer (Ret.)

November 3, 2004

Advances in Antisubmarine Warfare

Arthur Baggeroer, Professor
Department of Ocean Engineering, MIT

November 17, 2004

The Reaction in the Middle East to the U.S. Presidential Election

Efraim Inbar, Professor and Director
Begin-Sadat Center for Strategic Studies
Bar-Ilan University

February 2, 2005

Where Do We Go From Here? Prospects for an Israeli-Palestinian Rapprochement

Naomi Chazan, Wilhelm Fellow
Center for International Studies, MIT

February 9, 2005

American Air Power: What a Difference a Decade Makes

Thomas A. Keaney, Executive Director
Foreign Policy Institute, Johns Hopkins University

February 16, 2005

From Vietnam to Iraq: Reflections of a National Security Journalist

Bob Zelnick, Chairman
Department of Journalism, Boston University

February 23, 2005

Armed UGV/SWORDS: Development, Tactics & Deployment

Barbara J. Machak, Associate Technical Director and SFC David B. Platt (Ret.), Technical Manager
Systems Concepts and Technology, ARDEC

March 2, 2005

Structure, Dynamics and Health of the Defense Industry

Pierre Chao, Senior Fellow and Director
Defense-Industrial Initiatives
Center for Strategic and International Studies

March 9, 2005

The New Terrorism

Col. Russ Howard, USA, Professor and Head
Department of Social Sciences
U.S. Military Academy, West Point

March 16, 2005

The Darfur Crisis: Successes & Challenges in Planning an Effective African Peace Support Operation

Col. Michael L. Smith, USA (Ret.)
Consultant to the State Department

March 30, 2005

Remaking the Air Force After Vietnam

Marshall Michel, Visiting Scholar
Security Studies Program, MIT

April 6, 2005

State INR and its Role in the Intelligence Community

Thomas Fingar, Assistant Secretary of State and
Director of Bureau of Intelligence and Research

April 13, 2005

The Future of Stabilization Operations

Etienne de Durand, Associate Researcher
Institute Français des Relations Internationales

April 20, 2005

The Future of Warfare: Have the Classic Principles of Warfare Changed, or Do They Still Apply?

Geoffrey Wawro, Professor of Strategic Studies
U.S. Naval War College, Newport, RI

April 27, 2005

Space as a Global Utility: Operational Capabilities and Limitations of the Global Positioning System (GPS)

Lt. Col. Scott Henderson, USAF, Military Fellow
Security Studies Program, MIT and former
Commander, 2nd Space Operations Squadron, GPS

May 4, 2005

An Assessment of Iraq Two Years after the End of Major Combat

Roger Petersen, Associate Professor
Department of Political Science, MIT

May 11, 2005

Is Syria Next?

Flynt Lawrence Leverett, Senior Fellow
The Brookings Institution, Saban Center for Middle
East Policy

SEMINAR SERIES

SPECIAL SEMINARS

This series provides an opportunity for our visitors to explain trends in government policy or to raise new concepts in military practice.

October 15, 2004

Columbia Accident Lessons Affirmed

BG Duane W. Deal, USAF, Commander
21st Space Wing, Peterson Air Force Base

October 18, 2004

Military Innovation

George “Chip” Pickett, Vice-President
Marketing and Business Planning, Electronics and
Systems Sector of Northrop Grumman

October 22, 2004

Command in Air War: Centralized vs. Decentralized Control in the Combat Air Operations System

Lt. Col. Michael W. Kometer, USAF
AFIT/MIT Liaison Officer and MIT Engineering
Systems Division, Ph.D candidate

December 10, 2004

The Role of Women in the Israeli Defense Forces

(co-sponsored by Women in International Security)
Naomi Chazan, Professor and Visiting Fellow
Center for International Studies, MIT

March 3, 2005

Boots on the Ground: Japan in Iraq

Dennis Yasutomo, Professor and Director
East Asian Studies Program, Smith College

March 10, 2005

Address to the Military Fellows and Students

Kenneth O. Preston, Sergeant Major of the Army

This series reviews America's new wars, Afghanistan and Iraq.

**AMERICA'S
NEW WAR**

December 1, 2004

Update on the War on Terror

Security Studies Program Faculty

April 11, 2005

**A Combat Tea Party: Warfare and
Occupation in Iraq**

Major Robert Brown, USA

May 9, 2005

**Civil Affairs and Counter-Insurgency in the
Capital of Iraq's Sunni Triangle**

Lt. Jonathan Morgenstein, USMC

4th Civil Affairs Group, USMC Reserves

May 18, 2005

**Rebuilding Iraq: What the Reporters Don't
Tell You**

Capt. Kevin Brown, USA



Just testing.

SEMINAR SERIES

BIOSECURITY SEMINARS

The Biosecurity Seminars bring together international security specialists with the life sciences research community to examine the potential threat and research policy implications of biological weapons and bioterrorism.

March 7, 2005

Evaluating Bioterrorist Threat Agents: Implications for Life Sciences Research

Lawrence Kerr, Assistant Director for
Homeland Security, Office of Science and
Technology Policy, The White House

May 11, 2005

Weaponization of Biological Agents

Harvey McGeorge, President
Public Safety Group

April 11, 2005

Synthetic Biology: Pitfalls and Opportunities

Drew Endy, Assistant Professor
Biological Engineering, MIT



Try a little bit of this.

Our Discussion Series offers the program the opportunity to hear from senior government officials, industry executives, and high ranking military officers in a more formal setting.

DISCUSSION SERIES

October 6, 2004

MIT Faculty Club

The Future of Shipbuilding

John Shephard, Vice President

Newport News Shipbuilders

October 18, 2004

Harvard University Gunzburg Center

Transatlantic Cooperation in the Fight Against Terrorism

(co-sponsored with The Weatherhead Center
for International Affairs)

Antonio Vitorino, EU Commissioner of
Justice on Home Affairs

November 3, 2004

Cambridge Marriott

Flaws in the Planning of Iraq's Occupation?

Barbara Bodine, former Ambassador to Yemen and
Senior Advisor, Bureau of Political-Military Affairs

November 16, 2004

MIT Faculty Club

Current and Future Capabilities of the French Military

BG Coulloume-Labarthe, Commander

French Military Academy at St. Cyr

December 3, 2004

Cambridge Marriott

U.S. Sealift Capabilities and Plans

VADM David L. Brewer, III, USN

Commander of the Military Sealift Command

January 14, 2005

Cambridge Marriott

CENTCOM's Current Operations

Major General John Castellaw, USMC

Chief of Staff, U.S. Central Command

March 15, 2005

MIT Faculty Club

Composeable FORCEnet

Captain George Galdorisi, USN (Ret.)

March 31, 2005

MIT Faculty Club

Naval Aviation

RADM Matthew G. Moffit, Commander

Naval Strike and Air Warfare Center

April 28, 2005

Cambridge Marriott

Outlook for Terrorism in the Near East and South Asia

Paul Pillar, National Intelligence Officer for
Near East and South Asia

May 4, 2005

MIT Faculty Club

Report on the Commission on the Intelligence Capabilities of the U.S. Regarding WMD

Professor Charles Vest, President

MIT

SEMINAR SERIES

Each year, SSP Faculty and Fellows give a series of talks and classes at two defense research facilities: Draper Laboratory in Cambridge, MA, and MIT's Lincoln Laboratory in Lexington,

DRAPER LAB TALKS

October 18, 2004

Transforming U.S. Military Personnel Policies

Cindy Williams, Principal Research Scientist
MIT Security Studies Program

March 14, 2005

Combating Bioterrorism: Political, Policy and Organizational Dilemmas

Sanford Weiner, Research Fellow
MIT Security Studies Program

April 4, 2005

U.S./European Relations

Robert Art, Professor of International Relations
Brandeis University

LINCOLN LAB TALKS

May 28, 2004

Lessons Learned from September 11

Eleanor J. Hill, Staff Director
The Joint Congressional Inquiry on the Terrorist
Attacks of September 11, 2001

January 21, 2005

Intelligence Reform: Implications of the New Legislation

Robert Vickers, National Intelligence Officer
DCI's National Intelligence Council and visiting
lecturer, MIT Security Studies Program

February 18, 2005

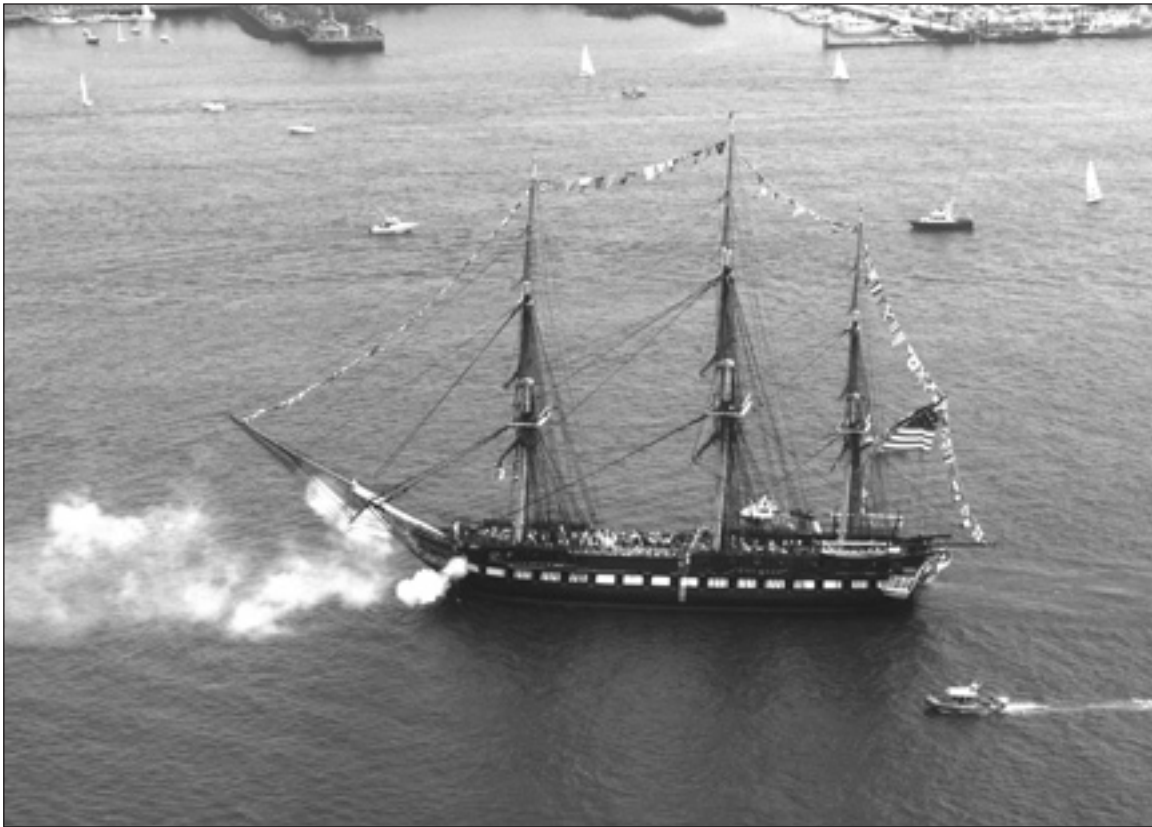
Assessing America's Strategy in the War on Terror

Steven VanEvera, Professor
MIT Security Studies Program

May 13, 2005

European Union Security and Defense Policy: Causes and Consequences

Barry Posen, Professor
MIT Security Studies Program



USS Constitution in its annual July 4th tour of Boston Harbor.

SPECIAL EVENTS

GENERAL JAMES H. DOOLITTLE AWARD LECTURE

Each year the MIT Security Studies Program honors the memory of General Jimmy Doolittle, aviation pioneer, Second World War hero, airpower advocate, and MIT graduate (SM '24 and Ph.D. '25) with a dinner devoted to a related topic.

April 13, 2005
MIT Faculty Club

Airpower in the Twenty-First Century

Gen. John P. Jumper, Chief of Staff of the
U.S. Air Force



The topic of the dinner this year was the transformation of the American Air Force, including the expanding importance of unarmed vehicles, precision munitions, and the F-22. General

Jumper also spoke about jointness in Afghanistan and Iraq, and addressed the rise of China as a military power in the coming decades.

General Jumper was presented with the General James H. Doolittle Award for his contribution to the development of the Air Expeditionary Force (AEF) concept. AEF divided the Air Force into 10 force packages, each with approximately 150-175 aircraft and 15,000 people. These AEF packages are able to respond within 72 hours of any unexpected contingency and are able to meet commanders' needs in a wide range of contingency operations.

ALUMNI DINNER

An opportunity to bring together program alumni and military fellows, past and present, for an evening of reminiscing. A purely social event, and hopefully the beginning of a tradition at the Security Studies Program.

November 19, 2004
SSP Alumni Dinner
Ritz Carlton
Arlington, VA

FIELD TRIPS

December 12-15, 2004
Colorado

- **Fort Carson**
- **North American Aerospace Defense Command (Cheyenne Mountain)**
- **Petersen Air Force Base**
- **Bradley Air Force Base**

February 4, 2005
Boston Harbor
Ship tour of USNS Charlton (T-AKR 314)

April 4, 2005
Cambridge, MA

Tour of Charles Stark Draper Laboratory

May 19, 2005
Boston Harbor

Ship tour of USS John F. Kennedy (CV-67)



*Fort Carson
(Colorado Springs)*

PUBLICATIONS

BREAKTHROUGHS

VOL. XIV, NO. 1 SPRING 2005

Robert Vickers, Jr., "Intelligence Reform: Problems and Prospects"

Joshua Rovner and Austin Long, "Intelligence Failure and Reform: Evaluating the 9/11 Commission Report"

Joyce Lee Malcolm, "The UN's Global Effort to Disarm Civilians: Wisdom or Folly?"

Harvey M. Sapolsky, "Canada: Crossing the Line"

BREAKTHROUGHS		
SPRING 2005 VOL. XIV, NO. 1		
	Intelligence Reform: Problems and Prospects <i>Robert Vickers, Jr.</i>	3
	Intelligence Failure and Reform: Evaluating the 9/11 Commission Report <i>Joshua Rovner and Austin Long</i>	10
	The UN's Global Effort to Disarm Civilians: Wisdom or Folly? <i>Joyce Lee Malcolm</i>	22
	Canada: Crossing the Line <i>Harvey M. Sapolsky</i>	31
Also in this issue: Op-Eds by Michael Schrage and Cindy Williams; SSP Conferences; Recent Publications		38
MITSSP Security Studies Program Massachusetts Institute of Technology		

EARLY WARNING

SSP Newsletter, produced eight times per year.



Breznitz, Dan (student), “Development, Flexibility, and R&D Performance in the Taiwanese IT Industry — Capability Creation and the Effects of State-Industry Co-Evolution,” *Industrial and Corporate Change*, Vol. 14, No. 1, (March 2005): 153-187.

Breznitz, Dan, “Collaborative Public Space in a National Innovation System: A Case Study of the Israeli Military’s Impact on the Software Industry,” *Industry and Innovation*, Vol. 12, No. 1, (March 2005).

Brown, Seyom, “Force and Foreign Policy: Imperatives and Illusions,” *International Trends* (Moscow, RU), Summer 2004.

Fravel, Taylor, “The United States as an Asian Power: Realism or Conceit?,” *Audits of the Conventional Wisdom*, MIT Center for International Studies, Massachusetts Institute of Technology, April 2005 (with Richard J. Samuels).

Fravel, Taylor, “US-China Relations and China’s New Diplomacy,” *Working Paper Series*, No. 18, Rohatyn Center for International Affairs, 2005.

Friedman, Benjamin and Ambassador Thomas Graham, “Law of the Sea Opponents Hurt US Security,” op-ed, *International Herald Tribune*, (April 21, 2005).



Handles like a F/A-22, but does it have Super Cruise?

- Gholz, Eugene, Press, Daryl G., Sapolsky, Harvey M., "Come Home, America," *The American Conservative*, (June 7, 2004).
- Gholz, Eugene, "Czars and Company Men: The Wrong Way to Run Space Acquisition," *Georgetown Journal of International Affairs*, Vol. 5, No. 2 (Summer/Fall 2004), pp. 11-19.
- Guillemin, Jeanne, "Making BU's Biolab Safe," op-ed, *Boston Globe*, (Monday, Jan. 31, 2005).
- Guillemin, Jeanne, *Biological Weapons: From the Invention of State-sponsored Programs to Contemporary Bioterrorism*, Columbia University Press, (December 2004).
- Malcolm, Joyce, "Political Scientists to the Rescue of Diplomatic and Military History," *Historically Speaking*, (July/August 2004).
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Allies steaming to help.

SSP TEACHING

Our Program's courses — what MIT prefers to call subjects — are open to all students eligible to attend classes at MIT, including cross-enrollers from Harvard and Wellesley. Most of the subjects are offered at the graduate level and through the Political Science Department.

Political Science doctoral candidates may use Security Studies as one of their fields of concentration. Within that context, Security Studies has two principal objectives: first, it introduces the student to the study of American defense policy, including the policy process, arms control, force structure, and military budgets. Second, it introduces the student to the study of the role of force in international politics and examines how countries have historically pursued their security interests. Students are expected to develop some competence in the methods of systems analysis, technology assessment, and strategic reasoning that shape the size and composition of U.S. strategic nuclear and general-purpose forces. The international military competition, the prospects for arms control and their implications for U.S. force planning receive special consideration in several subjects. Others examine some of the same issues by contrasting U.S. experiences and approaches with those of rivals and allies.

Students who plan to offer Security Studies for the general examination take two graduate-level subjects from those listed below in the Forces and Force Analysis section, and one subject each from the listing in the Defense Politics and in the Comparative Defense Policy sections. Competence in technical analysis is required. A background in economics to

intermediate level with particular emphasis on macroeconomics and public finance is advisable. The subjects in the Forces and Force Analysis section will provide sufficient review of the technical approaches to be examined. (Check with the Program for a current list of subjects, as the offerings can change each year.)

The write-off requirement is three subjects with equal distribution among the three sections preferred, although approval for alternative distributions may be granted in consultation with field faculty. A number of substantive fields in the Political Science Department deal with important determinants of U.S. defense programs and expenditures. Among the most closely related are: American Politics, International Relations and Foreign Policy. Students of defense policy are also encouraged to take subjects in economics.

COURSES

17.40 **American Foreign Policy:**

Past, Present, and Future Van Evera [U]

This subject's mission is to explain and evaluate America's past and present foreign policies. What accounts for America's past wars and interventions? What were the consequences of American policies? Overall, were these consequences positive or negative for the U.S.? For the world? Using today's 20/20 hindsight, can we now identify policies that would have produced better results? History covered includes World Wars I and II, the Korean and Indochina wars, and the Cuban Missile Crisis. Recent and contemporary crises and issues are also covered.

17.482-3J/STS 071J/STS 450J **U.S. Military**

Power Posen/Postol [U/G]

This subject is based on the concept of Grand Strategy as a system of inter-connected political and military means and ends. Topics covered include U.S. grand strategy, the organization of the U.S. military, the defense budget, ground forces, tactical air forces, naval forces, power projection forces, and the control of escalation. Particular episodes of military history that offer insights into current conventional forces issues are examined. Graduate students are expected to pursue the subject at greater depth through reading and individual research.

17.950 **Understanding Military Operations**

Cote [G]

This seminar will break apart current and possible future sea, air, space, and land battlefields into their constituent parts and look at the interaction, in each of those warfare areas, between existing military doctrine and current and projected technological trends in weapons, sensors, communications, and information processing. It will specifically seek to explore how technological development, innovation and/or stagnation are influenced in each warfare area by military doctrine.

FORCE AND

FORCE ANALYSIS



Navy Seals

**COMPARATIVE
DEFENSE
POLICY**

17.407/8 Chinese Foreign Policy

Fravel [U/G]

This course reviews and analyzes the foreign policy of the People's Republic of China from 1949 to the present. Discussion of Cold War history of Beijing's relations with the Soviet Union, the United States, Southeast Asia, and the Third World. Various theories of foreign policy are discussed as potential tools for understanding Chinese foreign policy behavior. Discussion of the future of Chinese foreign policy in light of the end of the Cold War, changes in the Chinese economy, and the post-Tiananmen legitimacy crisis in Beijing. Graduate students are expected to explore the subject in greater depth through reading and individual research.

17.42 Causes and Prevention of War

Van Evera [U]

Here the causes of war are examined, with a focus on practical measures to prevent and control war. Topics covered include: causes and consequences of national misperception, military strategy and policy as a cause of war, U.S. foreign policy as a cause of war and peace, and the likelihood and possible nature of another world war.

17.462 Innovation in Military Organizations

Posen and Sapolsky [G]

This course explores the origins, rate, and impact of innovations in military organizations, doctrine and weapons. Emphasis on organization theory approaches. Comparisons with non-military and non-U.S. experience included.

17.484 Comparative Grand Strategy and Military Doctrine Posen [G]

A comparative study of the grand strategies and military doctrine of the great powers in Europe (Britain, France, Germany, and Russia) from the late 19th to the mid-20th century. Examines strategic developments in the years preceding and during World Wars I and II. What factors have exerted the greatest influence on national strategies? How may the quality of a grand strategy be judged? What consequences seem to follow from grand strategies of different types?

17.486 Japan and East Asian Security

Samuels [G]

Explores Japan's role in world orders, past, present and future. Focuses on Japanese conceptions of security; rearmament debates; the relationship of domestic politics to foreign policy; the impact of Japanese technological and economic transformation at home and abroad; alternative trade and security regimes; and relations with Asian neighbors, Russia, and the alliance with the United States. Seminar culminates in a two-day Japanese-centered crisis simulation, based upon scenarios developed by students.

INTERNATIONAL-RELATED

17.418 **Field Seminar in International Relations** Fravel [G]

This field seminar provides an overview of the field of international relations and introduces two widely used typologies in the field. It then reviews the liberal, neo-liberal, realist, and neo-realist schools; the sociological literature on international relations; the constructivist literature on identity and interest formation in international politics; the mainstream literature on conflict and cooperation; and theoretically informed debates about the post-cold war world and the future of international politics.

17.432 **Causes of War: Theory and Method** Van Evera [G]

Examines the causes of war. Major theories of war are examined; case-study and large-n methods of testing theories of war are discussed; and the case-study method is applied to several historical cases. Cases covered include World Wars I and II.

17.436 **Territorial Conflict** Fravel [G]

While scholars have recognized that territory has been one of the most frequent issues over which states go to war, territorial conflicts have only recently become the subject of systematic study. This course will examine why territorial conflicts arise in the first place, why some of these conflicts escalate to high levels of violence and why other territorial disputes reach settlement, thereby reducing a likely source of violence between states. Readings in the course draw upon political geography and history as well as qualitative and quantitative approaches to political science.

AMERICAN DEFENSE POLITICS

17.428 **American Foreign Policy: Theory and Method** Van Evera [G]

Examines the causes and consequences of American foreign policy since 1898. Readings cover theories of American foreign policy, historiography of American foreign policy, central historical episodes including the two World Wars and the Cold War, case study methodology, and historical investigative methods. Open to undergraduates by permission of instructor.

17.460 **Defense Politics** Sapolsky [G]

Examines the politics affecting U.S. defense policies. Includes consideration of intra- and inter-service rivalries, civil-military relations, contractor influences, congressional oversight, peace movements in historical and contemporary perspectives, and U.S. defense politics before, during and after the Cold War.

17.953 **U.S. Military Budget and Force Planning** Williams [G]

This course is for students who want to know how the dollars we spend on national security relate to military forces, systems, and policy choices, and who wish to develop a personal tool kit for framing and assessing defense policy alternatives. The course aims to familiarize students with budgetary concepts and processes; to examine relationships among strategy, forces, and budgets; to explore tradeoffs among the main categories of defense spending; and to develop frameworks for identifying the costs of new military policies.

ADVANCED OFFERINGS

17.466 **Organizational Theory and the Military** Sapolsky [G]

A joint seminar which elaborates upon classical organizational concepts and methods to better understand modern military organizations and to develop new theory. It reviews organizational theory of the 1950s and 1960s and examines its applicability to the modern military. Among the topics covered are: recruitment, socialization and retention of personnel, unit cohesion, the effect of stress on performance, innovation and experiments, civil-military relations, the function of traditions, professionalism, federal-state relations, interservice relations, and the civilianization of the military.

17.468 **Foundations of Security Studies** Posen [G]

This course aims to develop a working knowledge of the theories and conceptual frameworks that form the intellectual basis of security studies as an academic discipline. Particular emphasis on balance of power theory, organization theory, civil-military relations, and the relationship between war and politics.

17.951 **Intelligence: Practices, Problems and Prospects** Posen, Sapolsky, and Vickers [G]

This seminar provides an overview of the US Intelligence Community, including its current organization, functions and interaction with national security policymakers. It focuses on key issues and concerns about its future structure and mission in a democratic society.

17.952 **Great Power Military Intervention** Posen [G]

The purpose of this seminar is to examine, systematically and comparatively, great and middle power military interventions into civil wars during the 1990s. The interventions to be examined are the 1991 effort to protect the Kurds in N. Iraq; the 1993 effort to ameliorate famine in Somalia; the 1994 effort to restore the Aristide government in Haiti; the 1995 effort to end the conflict in Bosnia Herzegovina; and the 1999 NATO war to end Serbia's control of Kosovo. By way of comparison, the weak efforts made to slow or stop the 1994 genocide in Rwanda will also be examined.



Airborne Laser takes a turn.

PROFESSIONAL EDUCATION

The MIT Security Studies Program has developed a growing interest in professional education as a way to stimulate discussion of international security problems and policy alternatives. Our initial activities have been through the MIT Professional Institute, but we are now exploring web-based and traveling courses as a way to reach a larger audience. We also offer an Independent Activities Period (IAP) course taught by officers from the Armed Forces Staff College, the National Defense University, the Kennedy School of Government and the MIT Security Studies Program.

Military Innovation: Technology and Strategy

This one-week course is organized by the MIT Professional Institute and taught by faculty from the MIT Security Studies Program as well as from the Political Science Department. Class sessions examine the problems of threat assessment, civil/military relations, the future of defense industries, and technological changes in designing corporate/national strategies. Emphasis is placed on innovative solutions and barriers to change.

Promoting Innovation: The Dynamics of Technology and Organizations

An MIT Professional Institute course which targets public and private businesses concerned with innovation as a means of keeping pace with a rapidly shifting environment. The course covers such topics as the innovation process, reshaping markets, and the politics of innovation in both the private and public sectors and is taught by MIT Security Studies Program director Professor Sapolsky and MIT Fellows (among others).

Combating Bioterrorism: The Organizational Response

This Professional Institute course examines the various institutional and professional obstacles to cooperation in our fight against bioterrorism and looks at strategies to overcome them. Taught by SSP affiliates and public health experts, this course reviews historical experience and outlines policy alternatives.

Joint Crisis Action Planning Exercise

This MIT IAP course looks at how the U.S. Armed Forces support the achievement of national strategic aims in a changing strategic environment. Topics include national security structure and organization, the Joint Strategic Planning System, capabilities and limitations of the Armed Services and Special Operation forces, and crisis action procedures. The course culminates in a simulated humanitarian assistance staff planning session in which students are assigned to key positions.

Organization and Capabilities of the Nation's Military Forces

Several MIT Security Studies Program and Harvard Kennedy School fellows examine the organization, capabilities and future structure of the U.S. Military as it relates to national security.

SSP-AFFILIATED GRADUATE STUDENTS

SSP-AFFILIATED DEGREE RECIPIENTS

Eric Heginbotham, Ph.D., Political Science
“Crossed Swords: Divided Militaries and Politics in East Asia”

Yinan He, Ph.D., Political Science
“Overcoming Shadows of the Past: Post-Conflict Interstate Reconciliation in East Asia and Europe”

Christopher P. Twomey, Ph.D., Political Science
“The Military Lens: Doctrinal Differences, Misperception, and Deterrence Failure in Sino-American Relations”

Dan Breznitz, Ph.D., Political Science
“Innovation and the State — Development Strategies for High Technology Industries in a World of Fragmented Production: Israel, Ireland, and Taiwan”

David Blum, SM, Political Science
“A Game-Theoretic Analysis of Electronic Warfare Tactics with Applications to the World War II Era”

Dan Carter, SM, Political Science
“Innovation, Wargaming, and the Development of Armored Warfare”

Boaz Atzili	Hebrew University (BA, Int'l Relations)	Michal Ben-Josef Hirsch	Tel Aviv University (BA, Political Science)
Rafael Bonoan	Columbia University (BA, Int'l Security)	Richard Kraus	U. Chicago (BA, Political Science)
Marc DeVore	Claremont McKenna College (BA, Int'l Relations and Economics)	Evan Liaras	Harvard University (BA, History)
	Institut D'Etudes Politiques (MA, Political Science)	Austin Long	Georgia Institute of Technology (BS, Politics)
Vanda Felbabova	Harvard University (BA, Government)	William Norris	Princeton University (BA, Politics)
Andrea Gabbitas	University of Chicago (BA, Political Science)	John Payne	Brigham Young Univ. (MA, Int'l Relations) (BA, Int'l Politics)
Michael Glosny	Cornell University (BA, History/Government)	Joshua Rovner	Boston College (MA, Political Science)
Colin Jackson	Univ. of Pennsylvania (MBA, Finance)		U. Calif-San Diego (BA, Political Science)
	Johns Hopkins/SAIS (MA, Int'l Economics)	Todd Stiefler	Williams College (BA, Political Science/ Economics)
	Princeton University (BA, Political Science)	Chikako Ueki	Sophia University (BA, Int'l Relations/ French)

**Ph.D.
CANDIDATES
POST-GENERALS**

SSP-AFFILIATED GRADUATE STUDENTS

PRE-GENERALS or MASTERS STUDENTS

Nicole Argo	Stanford University (MA, Int'l Policy Studies) (BA, Int'l Conflict Studies)	Gautam Mukunda	Harvard University (BA, Government)
Benjamin Brooks	MIT (BS, Aerospace Engineering)	Kenneth Nesmith	MIT (BS, Political Science and Biology)
Keren Fraiman	University of Chicago (BA, Political Science and Near East. Languages and Civilizations)	Whitney Raas	U. Calif-Los Angeles (BS, Physics)
Ben Friedman	Dartmouth College (BA, Government)	Paul Staniland	University of Chicago (BA, Political Science)
Brendan Green	University of Chicago (BA, Political Science)	Caitlin Talmadge	Harvard University (BA, Government)
Kelly Grieco	Dartmouth College (BA, Government)	Lonn Waters	Princeton University (BA, Political Science)
Stephanie Kaplan	Georgetown University (BS, Int'l Politics)	Adele Weinstock	Wellesley College (BA, Political Science)
Jon Lindsay	Stanford Univeristy (BS, Symbolic Systems) Stanford Univeristy (MS, Computer Science)		

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